

SUMMITSKILLS

**ASSESSMENT REQUIREMENTS FOR ELECTROTECHNICAL COMPETENCE-BASED QUALIFICATIONS  
Amended June 2016**

<p>1</p>	<p><b><u>FOREWORD – THIS DOCUMENT WAS UPDATED TO SHOW THE REMOVAL OF SIMULATION AS AN OPTION FOR DEMONSTRABLE EVIDENCE AND A STIPULATION OF MANDATORY TYPES OF CABLES AND CONTAINMENT SYSTEMS</u></b></p> <p>i. The assessment requirements detailed in this document are applicable to the <u>Level 3 NVQ Diploma in Installing Electrotechnical Systems and Equipment (Buildings, Structures and the Environment)</u> and <u>Level 3 NVQ Diploma in Electrotechnical Services (Electrical Maintenance)</u>, referred to as “The Qualification” throughout the document.</p> <p>ii. Assessment Requirements for the identified “Performance Units” must be in accordance with the SummitSkills’ <u>Consolidated Assessment Strategy for Units and Qualifications of “Occupational Competence” in the Qualifications and Credit Framework (England, Northern Ireland and Wales) for the Building Services Engineering Sector, April 2010,v2.1a (06.10)</u></p> <p>iii. In accordance with the “Fit-for-purpose” design of “The Qualification” candidates should be assessed on competence activities which are expected of a competent Electrician, who installs, inspects and tests electrotechnical systems and equipment in commercial, industrial and “residential” premises.</p> <p>iv. These assessment requirements will be introduced and implemented from <b>01 July 2016</b></p> <p>v. These assessment requirements will be reviewed between; September – December 2016 September – December 2017</p>
<p>2.</p>	<p><b><u>ASSESSMENT OF THE SCOPE/RANGE IDENTIFIED IN THE PERFORMANCE UNITS:</u></b></p> <p><b>Sources of Evidence/Assessment Requirements</b></p> <p><b><u>ELTP02: Applying environmental legislation, working practices and the principles of environmental technology Systems</u></b></p> <p>The purpose of the unit is to enable the candidate to provide knowledge of environmental aspects upon activities and potential renewable environmental technology possibilities. The scope would be relevant to the work-site at which the assessment of providing knowledge takes place.</p> <ul style="list-style-type: none"> <li>• Assessment of applying and imparting knowledge by an assessor should take place through “Professional Discussion/Assignment” with the candidate in the workplace, as to how they would impart the relevant knowledge to customers and clients.</li> <li>• LO1 and LO2: Auditable evidence sourced from a real working environment must be provided to illustrate that the candidate has demonstrated over a minimum of two separate activities, they can apply environmental legislation and working practices appropriate to the installation of electrotechnical systems and equipment</li> <li>• LO3 - Auditable evidence sourced from the workplace must be provided to illustrate that the candidate has demonstrated over a minimum of two separate activities, they can interpret and supply information on the operating principles of the identified environmental technology systems.</li> </ul> <p><b>NOTE:</b> EVs will be made aware by the AOs that this is <b>not</b> a practical assessment, but <b>must</b> be recorded as auditable evidence for verification purposes</p> <p><b><u>ELTP03: Overseeing and organising the work environment (Electrotechnical)</u></b></p> <p>i. The purpose of the unit is to enable the candidate to demonstrate they can apply the knowledge relevant to implementing practices and procedures for overseeing and organising the work environment for the installation of electrotechnical systems and equipment.</p>

## SUMMITSKILLS

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- ii. Assessment of implementing practices and procedures for overseeing and organising the work environment by an assessor should take place through “Professional Discussion/Assignment” with the candidate in the workplace, as to how they would implement practices and procedures for overseeing and organising the work environment
- iii. LO1 to 6 - Auditable evidence sourced from the workplace must be provided to illustrate that, the candidate has demonstrated over two separate activities they can implement practices and procedures for overseeing and organising the work environment for the installation of electrotechnical systems and equipment.

**NOTE:** EVs will be made aware by the AOs that this is **not** a practical assessment, but **must** be recorded as auditable evidence for verification purposes

### **ELTP04: Planning, preparing and installing electrical systems and equipment in buildings, structures and the environment**

Auditable evidence sourced from a real working environment must be provided to illustrate that the candidate has demonstrated over a minimum of two separate activities, they can plan, prepare and install electrical systems and equipment in buildings, structures and the environment identified in the awarding organisation's assessment guidance for each of the learning outcomes.

#### Types of Wiring Systems and Enclosures

1. Conduit (PVC)
2. Conduit (Metallic)
3. Trunking (PVC)
4. Trunking (Metallic)
5. Cable Tray
6. Cable Basket
7. Ladder systems
8. Ducting
9. Modular wiring systems
10. Busbar systems and Powertrack

A candidate is encouraged to provide evidence of the “Planning, Preparation and Installation” of all 10 types of wiring systems and enclosures listed above but **must** provide evidence of the following:

1. Conduit (PVC)
2. Conduit (Metallic)
3. Trunking (PVC)
4. Trunking (Metallic)
5. Cable Tray

#### Types of Cable

- 1) Thermosetting insulated cables including flexes
- 2) Single and multicore thermoplastic (PVC)
- 3) PVC/PVC flat profile cable
- 4) SWA cables (XLPE, PVC)
- 5) Fire resistant cable
- 6) MICC (with and without PVC sheath)
- 7) Armoured/braided flexible cables and cords
- 8) Data cables
- 9) Fibre optic cable

## SUMMITSKILLS

A candidate is encouraged to provide evidence of the “Planning, Preparation and Installation” of all 10 types of cables listed above but **must** provide as a minimum, evidence of the following:

- 1) Single and multicore thermoplastic (PVC)
- 2) PVC/PVC flat profile cable
- 3) SWA cables (XLPE, PVC)
- 4) Fire resistant cable

### **ELTP05: Terminating and connecting conductors, cables and flexible cords in electrical systems and equipment**

Auditable evidence sourced from a real working environment must be provided to illustrate that the learner has demonstrated over a minimum of two separate activities, they can terminate and connect, the conductors and cables identified in the awarding organisation’s assessment guidance for each of the learning outcomes.

#### Types of Cable

- 1) Thermosetting insulated cables including flexes
- 2) Single and multicore thermoplastic (PVC)
- 3) PVC/PVC flat profile cable
- 4) SWA cables (XLPE, PVC)
- 5) Fire resistant cable
- 6) MICC (with and without PVC sheath)
- 7) Armoured/braided flexible cables and cords
- 8) Data cables
- 9) Fibre optic cable

A candidate is encouraged to provide evidence of the “Termination and Connection” of all 10 types of cables listed above but **must** provide as a minimum, evidence of the following:

- 1) Single and multicore thermoplastic (PVC)
- 2) PVC/PVC flat profile cable
- 3) SWA cables (XLPE, PVC)
- 4) Fire resistant cable

### **3.2**

#### **ASSESSMENT OF OCCUPATIONAL COMPETENCE**

The assessment of “Occupational Competence” is a combination of evidence sourced from a real working environment and/or workplace as identified in the assessment requirements for each unit and evidence from mandatory simulated assessment provided by “The Qualification’s” Electrotechnical Occupational Competence unit’s assessment requirements. These requirements state that;

*“To undertake this unit, learners must provide auditable formal evidence that they have the relevant electrotechnical knowledge, understanding, experience and skills at the appropriate level that enables them to carry out the assessment activities effectively and safely as prescribed for each learning outcome”.*

Evidence from the workplace does **not meet** the full assessment requirements of “The Qualification’s Electrotechnical Occupational Competence” unit.